

FRBSF WEEKLY LETTER

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Real Wages in the 1980s

In the last presidential election we heard the slogan, "Good jobs at good wages." And a recent issue of *Businessweek* asked whether the under-30 generation will "... be the first Americans to be less prosperous than their parents." These statements reflect widespread concern that real wages dropped during the 1980s. In an attempt to understand this concern, this *Letter* first looks at how the real wage has behaved over the last decade or so, and then discusses what we learn from some recent research on the behavior of wages in the 1980s.

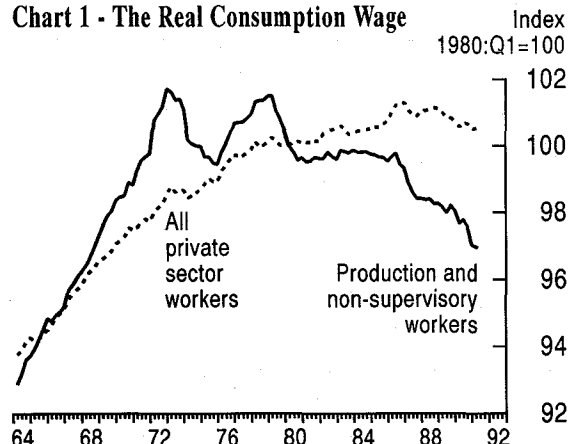
What do the data show?

One way to think about real wages is as a measure of purchasing power—the amount of goods and services a worker can consume for each hour of work. (For this reason I will refer to it as the consumption wage below.) To obtain this measure of the real wage, we deflate the hourly nominal wage by the implicit price deflator for consumption.

Chart 1 plots the purchasing power of one hour of labor from 1964Q1 (the first date for which these wage data are available) to 1991Q1 for two groups of workers. The consumption wage of production and nonsupervisory workers shows a sustained rise through the late 1960s and the early 1970s. Two sharp recessions followed, and while the real wage for this group rose after the first recession, it has shown no tendency to rise after the second one. Instead, a period of relatively flat real wages in the first half of the 1980s has been followed by sharp drops over the last five years. It is this latest decline that appears to have spurred the debate about the falling real wage.

The second line in the chart shows the consumption wage of all workers in the nonfarm private sector. This series is obtained by deflating the total compensation per hour of all workers in the nonfarm private sector by the implicit price deflator for consumption. The contrast between real wages for production and nonsupervisory workers and for all workers is immediate: There is no peak in the consumption wage of all private sector workers during the 1970s, nor is there any

Chart 1 - The Real Consumption Wage



evidence of a subsequent decline. At the same time, the consumption wage of all workers grew noticeably faster during the 1960s and early 1970s than during the late 1970s and the 1980s. Below we discuss some of the factors that have influenced the behavior of the aggregate wage rate over the 1980s, as well as some factors that have led to changes in the structure of wages.

Macroeconomic causes

A number of explanations of the recent behavior of the wage rate point to macroeconomic changes as the cause. Some of the most commonly heard have to do with the effects of increased foreign competition faced by the U.S. One version of this argument involves the behavior of the dollar. It states that the relatively high dollar in the early 1980s led to increased competition from abroad and forced the industrial sector in the U.S. to contract, eliminating a large number of high-paying manufacturing jobs. As a consequence, the aggregate wage rate declined. If this is the case, the problem should be on the verge of disappearing, since the dollar's decline in the second half of the 1980s should have led to a rebound in the wage rate. However, Chart 1 indicates that the wage rate of production and nonsupervisory workers has continued to fall, while the aggregate wage rate has shown little change over the last few years.

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This behavior suggests that the effects of increased foreign competition will not go away with a lower dollar. One way that increased foreign competition may have had a long-lasting effect on the domestic wage rate is by weakening labor unions. The automobile industry is a good example: It has had a tradition of strong unions and also has been hit hard by foreign competition. To the extent that wages in the unionized sector are higher than in the nonunionized sector, weaker unions should imply lower wages overall.

Of course, increased foreign competition is not the only factor that has weakened unions in recent years. Economists have pointed out that unions have lost strength because of domestic developments, such as the deregulation of the transportation and communication industries, as well as worsening worker attitudes toward unions. Rapid growth in nonunion employment over the 1980s has meant that unions now represent a much smaller proportion of the labor force.

A relatively high unemployment rate is often mentioned as another factor that may have exerted downward pressure on the wage rate in the 1980s. However, it is worth noting that the unemployment rate averaged 8.3 percent over 1980-84 but only 6.3 percent over 1985-89. While a high unemployment rate may have restrained wage increases during the early 1980s, this argument is much harder to see in the late 1980s. In fact, as a look at Chart 1 indicates, the fall in the consumption wage of production and nonsupervisory workers has been concentrated in the second half of the 1980s, a period when the unemployment rate was relatively low and falling.

Finally, the slow growth of wages in the 1980s may reflect a slowdown in productivity growth that began in the 1970s. Economists do not completely understand what caused this slowdown, or why the slowdown should have continued into the 1980s. In any event, slow productivity growth cannot explain why the consumption wage of production and nonsupervisory workers has been falling, because productivity has actually increased (on average) over this period.

The role of education and skills

An important difference between the two wage rates shown in the chart has to do with the kinds of workers whose wages are included in each category. In particular, workers with relatively

high levels of education and skills are more likely to be included in the group of all workers and not in the group of production and nonsupervisory workers. This distinction matters because the wage of workers with relatively low education and skills has declined rather noticeably in the 1980s.

Evidence on the behavior of relative wages is available in a number of recent studies of the wage structure. For instance, Katz and Revenga (1989) note that education wage differentials have widened dramatically in the 1980s, especially for those just entering the labor force. Similarly, Bound and Johnson (1989) use statistical analysis to show that the rate of return to education increased by almost 50 percent from 1979 to 1987. They also report that the wages of experienced workers increased relative to those of inexperienced workers, while the wages of female workers moved closer to those of male workers.

What accounts for the increased returns to education and experience, and the shrinking gender gap? The answer, to some people's surprise, is not demographic change. That answer would make sense if the supply of highly educated workers, experienced workers, and female workers had declined. But, as Bound and Johnson point out, the labor force got *more* educated, older, and therefore more experienced, and more female. Thus, demographic change is unlikely to be an important factor in explaining these changes.

A more likely answer is that product demand has shifted over this period. One reason for such a shift is the increase in the openness of the U.S. economy: the demand for some U.S.-manufactured goods has fallen because more acceptable substitutes are now being imported, while the demand for others has risen because they are now being exported. Since the average foreign worker is less skilled than the average U.S. worker, a more open economy (and the higher trade deficits run by the U.S.) implies that the unskilled domestic worker will face more competition as a consequence. In other words, increased international trade will affect the unskilled worker more than the skilled worker. In addition, as Katz and Revenga point out, product demand seems to have shifted from manufacturing industries, which tend to employ men with relatively less education, to services, which employ high school and college educated women and college educated men.

Researchers also have stressed the role played by technical change, pointing out that technical developments over this period are likely to have raised the returns to highly skilled labor. The rapid proliferation of computers is an obvious example of such a change. As a consequence, employers will be willing to bid more for workers with the relevant skills. Such a development would also explain why the returns to education went up during the 1980s, since higher returns are consistent with higher demand.

Another factor exerting downward pressure on the wages of men with relatively less education is the weakening of unions, since unions are more likely to be found in industries that tend to employ such workers.

Thus, factors such as shifting product demand, technological change, and weaker unions all seem to have played some role in the observed decline in the real wage of relatively less skilled workers. At this point in time it seems difficult to identify which single factor has been the most important.

Conclusions

What, then, should one make of the widespread concern about the falling real wage? Our discussion suggests that such concern reflects what is happening to one particular segment of the workforce. Available data show that the wages of workers with relatively less education are down; in addition, the decline seems to be concentrated in industries that were more unionized, that employed relatively more men, and that have been hit harder by foreign competition. While these individuals have suffered as a result, looking at their wage alone will lead to a biased view of how the economy-wide wage rate has been

behaving. The data reveal that relatively high-skilled workers have continued to do well, and the returns to college education have gone up sharply. Thus, the effect on relative wages appears to have been more pronounced than the effect on the aggregate, economy-wide wage rate.

At the same time, it is obvious that wage growth over the 1980s was nowhere like wage growth during the 1960s. Indeed, the consumption wage for all private sector workers seems to have shown little net change over the last five years (although it is likely that there will be some bounce-back after the current recession). Factors such as increased foreign competition probably have played some role in this change in behavior. There has also been a widely remarked upon slowdown in labor productivity during the mid-1970s, the causes of which are imperfectly understood, at best. The bottom line is that while the aggregate consumption wage rate did not fall dramatically during the 1980s, it did not show much of an increase either.

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References

- Bound, John, and George Johnson. 1989. "Changes in the Structure of Wages During the 1980's: An Evaluation of Alternative Explanations." NBER Working Paper no. 2983 (May).
- Businessweek*. 1991. "What Happened to the American Dream?" (August 19) pp. 80-85.
- Katz, Lawrence F., and Ana L. Revenga. 1989. "Changes in the Structure of Wages: The U.S. versus Japan." NBER Working Paper no. 3021 (July).

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Index to Recent Issues of *FRBSF Weekly Letter*

DATE	NUMBER	TITLE	AUTHOR
5/10	(91-19)	Changing the \$100,000 Deposit Insurance Limit	Levonian/Cheng
5/17	(91-20)	Recession and the West	Cromwell
5/24	(91-21)	Financial Constraints and Bank Credit	Furlong
5/31	(91-22)	Ending Inflation	Judd/Motley
6/7	(91-23)	Using Consumption to Forecast Income	Trehan
6/14	91-24	Free Trade with Mexico?	Moreno
7/5	91-25	Is the Prime Rate Too High?	Furlong
7/19	91-26	Consumer Confidence and the Outlook for Consumer Spending	Throop
7/26	91-27	Real Estate Loan Problems in the West	Zimmerman
8/16	91-28	Aerospace Downturn	Sherwood-Call
8/30	91-29	Public Preferences and Inflation	Walsh
9/6	91-30	Bank Branching and Portfolio Diversification	Laderman/Schmidt/ Zimmerman
9/13	91-31	The Gulf War and the U.S. Economy	Throop
9/20	91-32	The Negative Effects of Lender Liability	Hermalin
9/27	91-33	M2 and the Business Cycle	Furlong/Judd
10/4	91-34	International Output Comparisons	Glick
10/11	91-35	Is Banking Really Prone to Panics?	Pozdena
10/18	91-36	Deposit Insurance: Recapitalize or Reform?	Levonian
10/25	91-37	Earnings Plummet at Western Banks	Zimmerman
11/1	91-38	Bank Stock Risk and Return	Neuberger
11/8	91-39	The False Hope of the Narrow Bank	Pozdena
11/15	91-40	The Regional Concentration of Recessions	Cromwell

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